Amendments to the Claims

Please amend Claims 1, 6, 7, 12 and 13 to read as follows. Note that all the claims currently pending in this application, including those not presently being amended, have been reproduced below.

1. (Currently amended) A method for controlling the drive energy of an ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head to a printing medium for performing printing, the method comprising:

a first step for supplying a plurality of different drive energies successively to the ink jet print head;

a second step for monitoring temperature of the ink jet print head ~~according to the supply of the drive energy~~ in each supply of the plurality of different drive energies, the temperature reflecting a temperature change caused by each supplied drive energy;

a third step for judging a threshold drive energy required for ink ejection of the ink jet print head using a value for each supplied drive energy and a value for each monitored temperature;

a fourth step for determining a drive condition for ejecting ink on the basis of the threshold drive energy; and

a fifth step for driving the print element on the basis of the determined drive condition.

2. (Previously amended) A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said first step, a difference in the amount of each drive energy supplied to the ink jet print head is generated by changing a pulse width of a drive pulse signal applied to the print element.

3. (Previously amended) A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said first step, an initial drive energy supplied is determined on the basis of drive condition information stored in the ink jet print head.

4. (Previously amended) A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said fifth step, the determined drive condition is compared with drive condition information stored in the ink jet print head, and when both are different, the drive energy to drive the print element is changed.

5. (Previously amended) A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said fifth step, when the determined drive condition is different from drive condition information stored in the ink jet print head, the drive condition information stored in the ink jet print head is updated with the determined drive condition data.

6. (Currently amended) A method for controlling the drive energy of an ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head to a printing medium for performing printing, the method comprising:

a first step for supplying a plurality of different drive energies successively to the ink jet print head;

a second step for monitoring temperature of the ink jet print head ~~according to the supply of the drive energy~~ in each supply of the plurality of different drive energies, the temperature reflecting a temperature change caused by each supplied drive energy;

a third step for determining a drive condition for ejecting ink using a value for each supplied drive energy and a value for each monitored temperature; and

a fourth step for driving the print element on the basis of the determined drive condition.

7. (Currently amended) An ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head for performing printing, the ink jet print apparatus comprising:

first means for supplying a plurality of different drive energies successively to the ink jet print head;

second means for monitoring temperature of the ink jet print head ~~according to supply of the drive energy~~ in each supply of the plurality of different drive energies, the temperature reflecting a temperature change caused by each supplied drive energy;

third means for judging a threshold drive energy required for ejection of the ink jet print head using a value for each supplied drive energy and a value for each monitored temperature;

fourth means for determining a drive condition for ejecting ink on the basis of the threshold drive energy; and

fifth means for changing the drive energy applied to the print element of the ink jet print head on the basis of the determined drive condition.

8. (Previously amended) An ink jet print apparatus according to claim 7, wherein a change in each drive energy supplied to the ink jet print head is performed by changing a pulse width of a drive pulse signal applied to the print element.

9. (Previously amended) An ink jet print apparatus according to claim 7, wherein an initial drive energy supplied by said first means is determined on the basis of drive condition information stored in the ink jet print head.

10. (Previously amended) An ink jet print apparatus according to claim 7, wherein said fifth means compares the determined drive condition with drive condition information stored in the ink jet print head, and when both are different, changes the drive energy to drive the print element.

11. (Previously amended) An ink jet print apparatus according to claim 7, wherein said fifth means, when the determined drive condition is different from drive condition information stored in the ink jet print head, updates the drive condition information stored in the ink jet print head with the determined drive condition data.

12. (Currently amended) An ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head for performing printing, the ink jet print apparatus comprising:

first means for supplying a plurality of different drive energies successively to the ink jet print head;

second means for monitoring temperature of the ink jet print head ~~according to supply of the drive energy~~ in each supply of the plurality of different drive energies, the temperature reflecting a temperature change caused by each supplied drive energy;

third means for determining a drive condition for ejecting ink using a value for each supplied drive energy and a value for each monitored temperature; and

fourth means for changing the drive energy applied to the print element of the ink jet print head on the basis of the determined drive condition.

13. (Currently amended) An ink jet print apparatus wherein a memory for storing drive condition data is provided on an ink jet print head, by driving a print element an ink is ejected from the ink jet print head to a printing medium for performing printing, the ink jet print apparatus comprising:

first means for supplying a plurality of different drive energies successively to the ink jet print head;

second means for monitoring temperature of the ink jet print head ~~according to supply of the drive energy~~ in each supply of the plurality of different drive energies, the temperature reflecting a temperature change caused by each supplied drive energy;

third means for judging a threshold drive energy required for ink ejection of the ink jet print head using a value for each supplied drive energy and a value for each monitored temperature;

fourth means for determining a drive condition for ejecting ink on the basis of the threshold drive energy; and

fifth means for comparing the determined drive condition with drive condition information stored in the ink jet print head and, when both are different, updating drive energy information stored in the memory of the ink jet print head with the determined drive condition data.

14. (Previously amended) An ink jet print apparatus according to claim 13, wherein the memory provided on the ink jet print head is an EEPROM.

15. (Previously added) A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein energy supply to the ink jet print head is made by applying drive signals to heat generation elements of the ink jet print head.

16. (Previously added) An ink jet print apparatus according to claim 7, wherein energy supply to the ink jet print head is made by applying drive signals to heat generation elements of the ink jet print head.